• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. 1 JULY 20, 1934. No. 13

PUSHAWALLA CAMP

In addition to being one of four points of access to the 18-mile East Coachella tunnel, this camp contains the machine shop which serves the Coachella Division of the aqueduct.

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AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. 1 July 20, 1934 No. 13

ADDITIONAL EVIDENCE

From New York City last week came a statement of unusual interest to all citizens of the Metropolitan Water District—a statement giving new weight to the universal recognition of Southern California's vital need for a new water supply.

It was contained in a report issued by a leading financial service, famed everywhere for the accuracy of its information and the soundness of its opinions. The following quotations from the report, published by a remote and disinterested agency, may be added to the vast amount of evidence of the necessity of the Colorado River Aqueduct.

"The region in which the cities of the Metropolitan Water District are situated is naturally semi-arid with a mean average rainfall of only fifteen inches," the report points out.

"The surrounding areas likewise are arid and yield but little runoff with the result that this section of Southern California, embracing twenty per cent of the land of the state which is favorable to human habitation, has but a little over one per cent of the waters of the state tributary to it. This amount provides the only local supply by which is supported a population of over 2,700,000 or approximately fifty-seven per cent of the entire population of California.

"The present development of this region was made possible only by the existence of immense gravel beds underlying the area from which water, accumulated over many thousands of years prior to the settlement of the territory, has been pumped to provide the excess required above the normal local supply and the supply furnished by Owens Valley Aqueduct. These underground reservoirs are rapidly being depleted, for natural replenishment is far below the withdrawals, which average in excess of 200,000,000 gallons daily . . . .

"Various municipalities . . . turned their attention to the Colorado River, 200 miles to the east, the only adequate source from which an additional water supply could be obtained."

GENERAL MANAGER REVIEWS ACTIVITIES OF MONTH ON AQUEDUCT

(Editor's Note: The following is a brief summary of the monthly report of Assistant General Manager Burkholder (in the absence of General Manager and Chief Engineer Weymouth), filed with the Board of Directors in July, covering work during June. These summaries are presented at regular intervals.)

Legal Division—Regular work was continued on legal matters involving the District.

Miscellaneous Activities Division — During June the District's labor employment office issued a total of 859 Certificates of Registration, or permanent identification cards, to employment applicants and contractors' employees. A total of 3,457 of such certificates had been issued up to June 30. Six hundred and forty-one men were cleared through the District's labor office for employment on aqueduct construction work.

Construction Division—(See progress table on Page 6.) The construction camp at Fan Hill has been dismantled and the equipment stored at Indio. All construction is completed. Seepage and other tests are still under way. Good progress was made in the installation of pipe on the Little Morongo precast pipe siphon. At the end of the month the laying of pipe on the westerly slope of the canyon had been practically completed.

Field Engineering Division—The engineering work in connection with the construction of the aqueduct consisted of the giving of lines and grades, supervision, inspection, and computation of quantities for all the tunnels and the Little Morongo siphon. The construction of 300 test slabs and 550 test cylinders under typical field conditions using special cement prepared at the University of California has been completed by the staff of the testing laboratory, and observations and data have been plotted of the performance of these specimens. District roads are being maintained by maintenance crews working from the various Division headquarters. Supervision was given to transmission, telephone, and water lines. During the month of June a total of 4,588,800 kwhr of power were used, 13,500 telephone calls were handled, and 2,329,579 cubic feet of water were delivered.

Office Engineering, Civil — Draft of specifications had been completed at the end of the month for conduit, canal, and siphons for all of Divisions 1 and 2 of the aqueduct and sufficient progress had been made on similar specifications for Divisions 4, 5, and 6 so that as soon as money is available, specifications for this open work on these divisions can be issued at short intervals until all such work from the Colorado River to Cajalco is under advertisement. Specifications for Division 2 headquarters have been revised and made ready for issuance when desired.

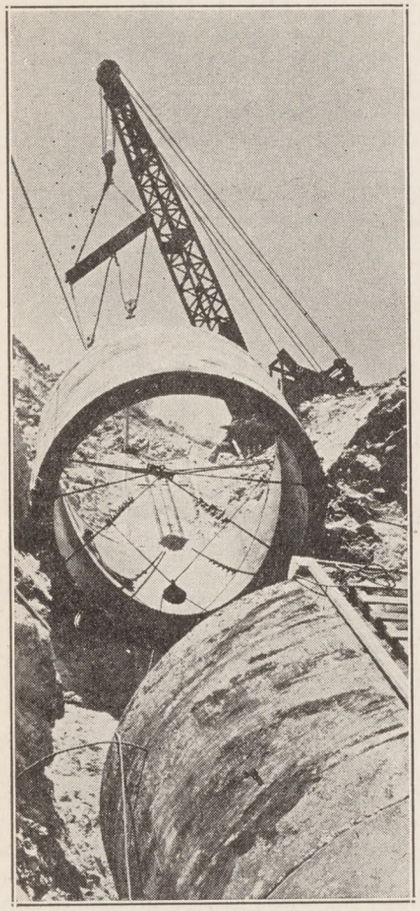
Electrical Engineering Division—A report on the design of tower foundation for the 230 kv line was completed. Office studies of the profiles for both aluminum and copper lines were continued. Estimates of cost and comparison of arrangements were made for different types of pumping plant buildings, semi-circular, annular, and rectangular. Preliminary figures indicate that the rectangular building would be the most desirable. At the District's hydraulic laboratory piping has been completed and tested, and the service pumps have been operated. Work was continued on the design of the telephone line from Iron Mountain to Boulder and on the proposed installations in the main pumping plants. Decision having been made regarding the general design of the crushing and screening plant to be built at Wide Canyon, the drawings and specifications were scheduled to be ready to issue by July 15. Studies and designs for construction plants for the main aqueduct were continued.

Right of Way Division — Regular work was continued on the securing of aqueduct rights of way.

Personnel Division—The May labor turnover for all District forces was 8.92 percent. The turnover for classified positions was 3.02 percent and for unclassified positions 11.06 percent. This turnover is somewhat higher than for the month of April.

Purchasing Division—A total of 1,132 purchase orders were issued covering purchases amounting to approximately $136,914.16.

Accounting and Costkeeping Division —Actual costs to June 30, 1934, amounted to $21,705,042.41, covering portions of works and activities, the total cost of which is estimated at $61,668,772.



Installing the 40-ton concrete sections of Little Morongo siphon, and (below) oil truck makes interesting comparison with 12-foot diameter pipe.

LAYING OF PIPE ON MORONGO SIPHON COMPLETED; FAN HILL STRUCTURE RECEIVING TESTS

The laying of pipe on the second Colorado River Aqueduct siphon—the precast Little Morongo job—was scheduled to have been completed this month.

The progress report of July 14 revealed that 615 feet of the 723 feet of pipe had been placed; the ramp and equipment used in laying pipe sections on the west slope of the siphon were dismantled and installed on the east slope of the siphon. Backfill and lead caulking had been completed across the floor of the canyon.

Meanwhile, a few miles to the east, the monolithic Fan Hill siphon was essentially completed, the backfilling of the structures with a bulldozer being the only construction carried forward during the week. At the same time, however, engineers continued soil pressures, strain, expansion, temperature, and leakage.

Thus was the stage nearly set for an experiment of importance to Colorado River Aqueduct construction. The two siphons—one monolithic and the other precast—will be carefully tested to determine which type is best suited to conditions along the aqueduct line.

The monolithic Fan Hill job—poured as one solid piece of masonry—was constructed by forces of the Metropolitan Water District. The Little Morongo job—poured in 12-foot sections weighing 40 tons—is being built by United Concrete Pipe Company and the American Concrete and Steel Pipe Company.

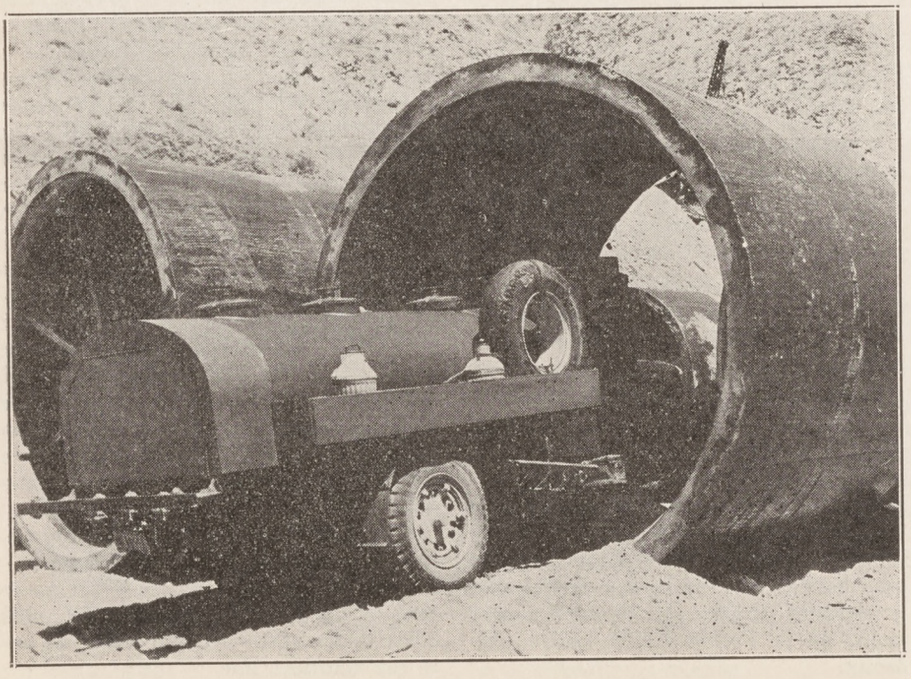
These two siphons are the first of 150, totaling 27 miles in length, which will be built to carry aqueduct water across declevities in the desert terrain between the Colorado River and Cajalco Reservoir.

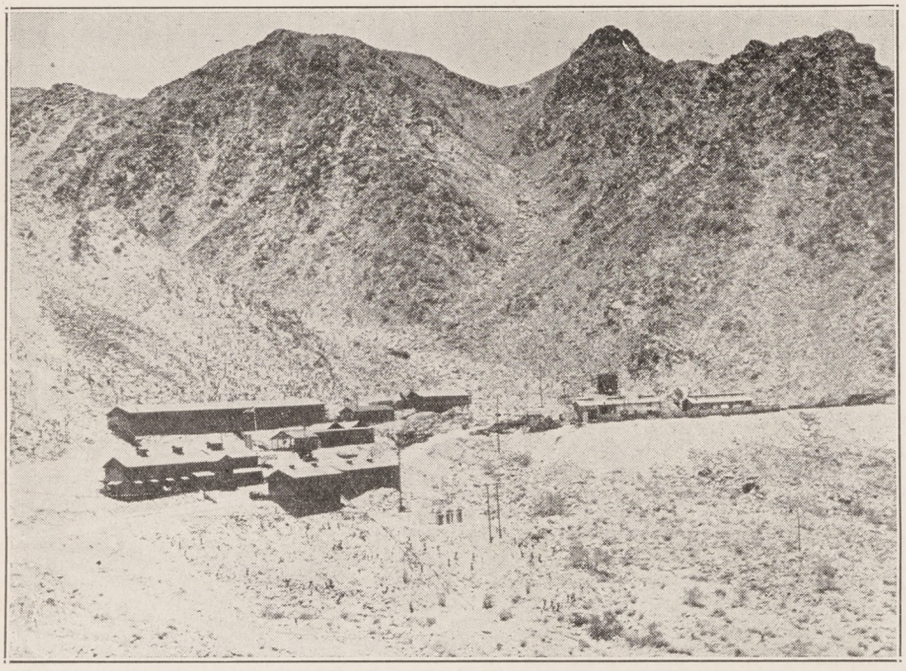
All of the aqueduct's siphons will be built in two barrels, each approximately 12 feet inside diameter. To safeguard the pipes from washouts caused by sudden desert cloudbursts, which are characteristic of the country traversed, they will be laid in large trenches, and buried beneath the bottoms of the washes.

The name "siphon" is, in a way, a misnomer insofar as the aqueduct structures are concerned. They do not, in fact, exert any siphonic action. They act merely as pressure pipes in which the water will find its own level after running down to the bottom of one of the desert canyons, and continuing up the other side. The two ends of the siphons are at practically the same level, the downstream end being slightly lower in order to overcome head lost through friction in the pipe. In short, the aqueduct's siphons work on the same principal as an ordinary U tube such as is found in any chemical laboratory. The name "siphon" has been applied simply because it is a good descriptive word—the pipes resembling in appearance an inverted siphon.

It is interesting to note that these siphons constitute one of the fundamental differences between modern aqueduct engineering and that practiced by the ancient Romans in the building of their famed water supply systems.

Roman engineers drove tunnels and constructed conduits basically similar to those used on modern aqueducts, but when they came to canyons or valleys which had to be crossed, they were forced to resort to long arcades or trestles to maintain the grade line of their aqueducts. They had no means of building pipes sufficiently strong to withstand the water pressure resulting from a drop into the declevity and the rise on the other side.





The Hunkin & Conkey Camp at Hayfield Tunnel No. 1

Pumping Launched At Potrero Shaft

Two deep well turbine pumps, each with a capacity of 1,200 gallons per minute at an 800-foot lift, were put in operation last week at Potrero shaft on San Jacinto tunnel and was effectively lowering the water as crews got under way with the task of clearing the shaft and tunnel which were flooded on the morning of July 1.

In addition, a third pump with a capacity of 2,600 gallons per minute is now being assembled. The motor for the larger pump is being built in the East, while the other two were made locally.

Drying sheds have been erected, and other preparations made for reconditioning the pump motors and other mechanical equipment submerged.

Water broke through in the east heading at 3:30 a. m. while the men were working in the west heading. The flow, in the form of a wave two feet high, crossed the sump and entered the west heading. By 6:15 the depth of water in the tunnel was 11 feet. It eventually reached a depth of 646 feet in the shaft, after filling both legs of the tunnel.

Meanwhile, Wenzel and Henoch crews were working as usual at other points along the tunnel line. On the east heading at Cabazon shaft the average for the 30 days ending July 15 was 8.9 feet per shift, making a total of 720 ft.

H. & C. Crews Reach One-Third Mark On Tunnel

Hayfield Tunnel No. 1, being driven by Hunkin & Conkey, was well past the one-third mark in excavation last week, with approximately 35 percent of its total length driven.

Being excavated from a 511-foot adit, the tunnel is 9,677 feet long. A total of 5,317 feet will be driven east from the adit and 4,360 feet west. Up to July 15, 1,845 feet of excavation had been completed in the east leg and 1,527 feet west.

Until the latter part of June only two shifts were worked on the job. Recently the number has been increased to three. Both headings required timbering for practically the entire distance.

General superintendent on the job is G. B. Hoag; F. Backlund is tunnel superintendent. G. E. Conkey is president of Hunkin & Conkey Construction Company and S. E. Hunkin is vice-president.

Last week Mr. Hoag re-issued his invitation to all aqueduct employees who are devotees of the ancient Scotch pastime to play the spectacular six-hole golf course which has been laid out on the floor of Hayfield Dry Lake. Those who have played the course report that it contains thrills and hazards never heard of at Pebble Beach or St. Andrews.

Four Post Offices Serve Aqueduct Workers

Four new desert communities were in evidence last week on the postal map of the United States as a direct result of heavy construction activity along the far-flung route of the Colorado River Aqueduct.

The new post offices, established by the Government to facilitate the handling of aqueduct mail are Berdoo Camp, California; Whipple, California; Rice, California; and Desert Center, California. Each stands for an entirely new aqueduct community or for one which has been developed largely through aqueduct construction.

The four postal stations, serving the more remote sections of the aqueduct line, materially aid construction work by speeding the delivery of official communications between Los Angeles and the field.

The Berdoo Camp post office serves the eight construction camps on the Coachella Division of the aqueduct on which thirty-six miles of tunneling is going forward. Berdoo Camp itself is a thriving community of 200 men. It is strictly an aqueduct community, having been built in its entirety by the Metropolitan Water District.

Whipple, California, post office has been established to serve construction forces working on Parker Dam, tunnel crews at the eastern end of the aqueduct line, and District engineers on Division No. 1 of the aqueduct. It is located in the Whipple Mountains, near the banks of the Colorado River. Fittingly, it is named for that intrepid army officer, Lieutenant Whipple, who in 1854 made a survey of a railroad route near the thirty-fifth parallel from the Mississippi to the Pacific for the Government. The survey crossed the Colorado River in the vicinity of Parker Dam site.

Although it had been established many years as a railroad station, it was not until aqueduct construction work started that Rice, California, became a post office. Prior to the location of postal facilities there, mail for Rice was carried through to Blythe, and then returned on the next train by courtesy of the Santa Fe train crews, causing a delay of many hours.

Likewise, Desert Center, California, had for many years been a landmark—located on Highway No. 60—but never rose to the estate of a post office until construction crews began moving out onto the aqueduct line.

DIRECTORY

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S. H. Finley, Secretary

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Asst. General Manager.....J. L. Burkholder
Asst. Chief Engineer.....Julian Hinds
General Counsel.....James H. Howard
Asst. Controller.....J. M. Luney
General Superintendent.....James Munn
Chief Elec. Engineer.....J. M. Gaylord
Construction Engineer.....J. B. Bond
Asst. to Gen. Mgr.....Don J. Kinsey

DIVISION ENGINEERS

Division 1.....R. C. Booth
Divisions 2 and 3.....John Stearns
Division 4.....R. B. Diemer
Divisions 5 and 6.....B. C. Leadbetter

SUPERINTENDENTS

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., F. T. Huntington, Gen. Supt.; W. A. Huntington and E. A. Hatch, Tunnel Supts.

Coxcomb Tunnel and Iron Mt. shaft, Winston Bros., E. A. Bernard, Gen. Supt.; F. T. Hillman and R. B. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Constr. Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon. C. J. Kavanagh, Gen. Supt.

West Eagle Mt. Tunnel, west portion L. E. Dixon and Bent Bros., P. C. Guinn, Gen. Supt.

Hayfield Tunnel No. 1, Hunkin & Conkey Constr. Co., G. B. Hoag, Gen. Supt.; F. Backlund, Tunnel Supt.

Hayfield Tunnel No. 2, Shofner & Gordon, H. E. Warden, Gen. Supt.

Cottonwood Tunnel, J. F. Shea Co., Inc., Gilbert Shea, Gen. Mgr.; Joe Bonner and Carl Nelson, Tunnel Supts.

Mecca Pass Tunnels, Morrison-Knudsen, S. A. Dahlberg, Gen. Supt.; C. A. Griffen, Asst. Supt.

Coachella Division, R. M. Merriman, Division Supt.

Yellow Canyon Adit, E. Coachella Tunnel—
District Force Account.....W. L. Taylor

Fargo Adit, East Coachella Tunnel—
District Force Account.....J. H. Manwaring

Berdoo Adit, East Coachella Tunnel—
District Force Account.....F. A. Weller

Pushawalla Adit, East Coachella Tunnel—
District Force Account.....Kenneth MacIsaac

Thousand Palms—
District Force Account.....D. L. Reaburn

Wide Canyon—
District Force Account.....John Jackman

Long Canyon—
District Force Account.....E. E. McCabe,

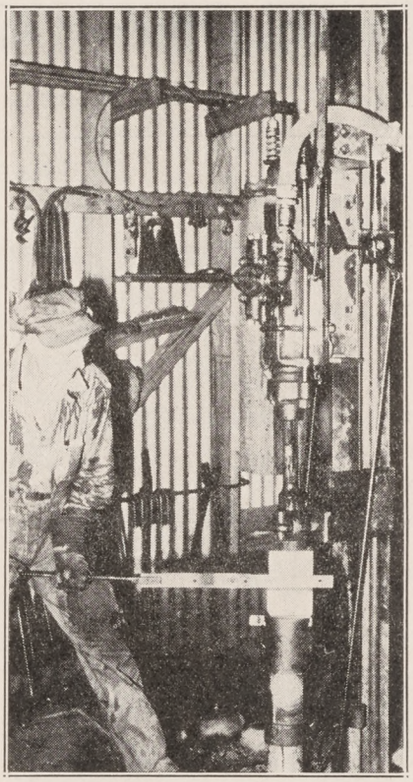
Little Morongo—
District Force Account.....R. L. Bryant,

Whitewater Tunnels, West Constr. Co., H. E. Carleton, Gen. Supt.; Angus MacDonnell, Tunnel Supt.

San Jacinto Tunnel, Wenzel & Henoch, Walter Hoenecke, Gen. Supt.; W. A. Boyd, Walter Baer, and Jack May, Tunnel Supts.

Bernasconi Tunnel, Hamilton & Gleason Co., H. J. King, Gen. Supt.

Valverde Tunnel, Dravo Contr. Co., R W. Remp, Gen. Supt.; H. C. Richarson, Asst. Gen. Supt.; Dean Luther, J. R. Glaeser, Jack Stone, and Fred Youmans, Tunnel Supts.



Charles Leslie and his air hammer.

Old Drill Used As Air Hammer At Berdoo

Charles Leslie, blacksmith at the Berdoo Camp machine shop, has hit upon an excellent way to save his biceps by using his brain.

The illustration above shows the Leslie brain child, put in operation last week. It is an old single stroke Ingersoll Sargent drill which has been transformed into a six-inch air hammer.

Operated with a foot control, the hammer is estimated to be capable of hitting a ton stroke.

Generous Gift

Through the generosity of a neighbor, W. G. Anderson, the Little Morongo library has come into possession of a truck load of magazines. Not only did Mr. Anderson give the magazines but brought them in his own truck. Suitable shelving has been provided in the commissary, and to show that this act of thoughtfulness on the part of Mr. Anderson is truly appreciated it might be stated that more than half of this library is in constant circulation.

Parker Dam Bids To Be Received On July 26

Interest of construction men and engineers in Southern California and elsewhere in the country was centered this week on the Colorado River, as officials of the United States Reclamation Bureau prepared to receive bids on the building of Parker dam from behind which the Metropolitan Water District will divert its share of the stream's flow.

Bids will be received at the Bureau's Los Angeles office, 608 Grant Building, until 10 a. m., July 26.

Meanwhile at the aqueduct project's Division No. 1 headquarters on the river, Construction Engineer Olaf Laurgaard and a crew of 12 Reclamation Bureau men were making ready for the launching of work. The lobby of the Divisional guest lodge is serving temporarily as a clerical office, and the facilities of the dormitory and office building have been made available to the newcomers.

The power boats and barges at Parker dam site have been overhauled, caulked, and put in shape for use.

The new dam will be constructed by the Reclamation Bureau under terms of a contract with the Metropolitan Water District. The District is to furnish funds to finance the project, the estimated cost of which is $13,000,000.

The dam will be of concrete arch design, 800 feet long across its crest and 315 feet high from bedrock. Its maximum thickness will be 100 feet. Specifications call for the construction of an 18-foot roadway across the dam's crest.

A distinctive feature of the structure will be five Stoney gates, fifty feet by fifty feet, mounted on the crest of the dam to permit the passage of flood waters.

Located 150 miles downstream from the Federal Government's huge Boulder Dam project, the structure at Parker will be used primarily for diversion rather than for storage. It will raise the level of the river approximately 80 feet. The reservoir to be formed will be approximately 50 miles long, extending upstream almost as far at the city of Needles. The reservoir capacity will be 717,000 acre feet.

An interesting feature of Parker Dam will be the excavation for its foundation. The depth of the hole will be 230 feet—or deep enough to accommodate two limit-height Los Angeles office buildings, one on top of the other, with only 60 feet of the upper one extending above the river bed.

BEST PROGRESS
This Period
Rock Tunnels - Colorado River 806 ft.
Gravel Tunnels - Whitewater No. 2, 714 ft.

TUNNEL PROGRESS

June 16 - July 15, 1934
Tunnel Excavated to Date, 32.34 Miles

BEST WEEK'S PROGRESS
This Year
Rock Tunnels - Colorado River, 251 ft.
Gravel Tunnels - Whitewater No. 2, 233 ft.

TUNNELS ON CONTRACT	Length in feet	Number of Shifts	EXCAVATION PROGRESS IN FEET: Average Per Shift	This Period	Total to date
Walsh Constr. Co.					
COLORADO RIVER	(5514)				
West Portal	5514	81	10.0	806	900
COPPER BASIN, No. 1	(752)				
West Portal	752			0	752
COPPER BASIN, No. 2	(11,580)				
East from adit	1878			0	1878
Adit	330			0	330
West from adit	9702	81	9.6	780	4629
WHIPPLE MT.	(32,265)				
East from adit	18,352	81	8.0	646	4428
Adit	924			0	924
West from adit	13,913	81	6.9	556	3744
Winston Bros.					
IRON MT.	(39,759)				
East from shaft	9844	69	4.8	328	1931
Shaft	165			0	165
West from shaft	13,743	69	7.4	513	4499
Utah Constr. Co.					
IRON MT.					
West Portal	16,172	72	6.9	499	7269
Winston Bros.					
COXCOMB	(17,795)				
East Portal	8765	69	7.7	535	5550
West Portal	9030			0	0
Broderick & Gordon					
EAST EAGLE MT.	(9,442)				
West Portal	9442	66	3.2	209	209
WEST EAGLE MT.	(26,494)				
East from adit	7871	66	4.4	293	1875
Adit	2008			0	2008
West from adit	7974	66	2.6	171	1143
Dixon & Bent					
WEST EAGLE MT.					
West Portal	10,649	70	6.6	466	5247
Hunkin & Conkey					
HAYFIELD, No. 1	(9677)				
East from adit	5317	69	5.0	345	1845
Adit	511			0	511
West from adit	4360	69	5.2	356	1527
Shofner & Gordon					
HAYFIELD, No. 2	(5375)				
West Portal	5375	50	7.4	372	2750

TUNNELS ON CONTRACT	Length in feet	Number of Shifts	EXCAVATION PROGRESS IN FEET: Average Per Shift	This Period	Total to date
J. F. Shea Co.					
COTTONWOOD	(20,105)				
East Portal	10,114	78	9.0	703	6468
West Portal	9991	72	8.4	605	6118
Morrison-Knudsen					
MECCA PASS	(5,940)				
No. 1, West Portal	338			0	338
No. 2, West Portal	997	71	4.1	289	473
No. 3, East Portal	4605	12	8.5	102	4605
West Constr. Co.					
WHITEWATER	(10,206)				
No. 1, West Portal	2060	0	0	0	35
No. 2, East Portal	8146	69	10.3	714	6837
Wenzel & Henoch					
SAN JACINTO	(67,415)				
East from Cabazon	8553	87	0.9	81	680
Cabazon shaft	246			0	246
Cross drift	935			0	935
West from Cabazon	22,839	87	8.4	729	2730
East from Potrero	20,589	30	1.7	51	160
Potrero shaft	796			0	796
West from Potrero	6712	36	1.6	58	223
West Portal	8722	87	3.1	270	1949
Hamilton & Gleason					
BERNASCONI	(6220)				
East Portal	6220	53	6.7	358	3912
Dravo Contr. Co.					
VALVERDE	(38,765)				
East from Shaft 1	2140	41	5.0	203	1699
Shaft 1	64			0	64
West from Shaft 1	1525	81	2.6	214	1156
East from Shaft 2	5400	81	5.3	428	3900
Shaft 2	204			0	204
West from Shaft 2	5400	81	4.6	370	3760
East from Shaft 3	6950	18	0	0	2450
Shaft 3	192			0	192
West from Shaft 3	6950	81	6.3	509	3743
East from Adit	5117			0	0
Adit	406	54	2.2	121	224
West from Adit	5283			0	0
Total Excav. Contract Tunnels exclusive of Adits and Shafts (In Miles)	307,304 58.20	2124	5.91	12,559 2.38	101,412 19.21

TUNNELS ON FORCE ACCOUNT

	Sched.					
EAST COACHELLA TUNNEL		(96,610)				
Yellow Canyon Adit		686			0	686
East from adit	1	10,204	78	7.1	555	6188
West from adit	1	10,076	78	8.9	693	6003
Fargo Canyon Adit		891			0	891
East from adit	2	11,850	78	6.6	511	5352
West from adit	2	15,200	78	4.9	386	4831
Berdoo Canyon Adit		2042			0	2042
East from adit	3	15,824	78	9.6	747	6483
West from adit	3	12,456	78	10.0	778	6267
Pushawalla Canyon Adit		2935			0	2935
East from adit	4	10,186	78	6.8	529	3778
West from adit	4	10,814	78	5.2	407	4057
WEST COACHELLA TUNNELS		(81,109)				
THOUSAND PALMS						
No. 1, West Portal	5	16,058	78	4.6	359	5468
No. 2, Tunnel	5	3838			0	3838

	Sched.					
WIDE CANYON						
No. 1, E. Portal	5	5122	78	6.2	485	1834
No. 1, W. Portal	6	9183	78	3.9	303	5172
No. 2 Tunnel	6	848			0	848
SEVEN PALMS		(16,730)				
E. Portal	6	8390	78	5.1	399	4531
W. Portal	7	8340	78	7.3	566	1277
LONG CANYON		(15,240)				
E. Portal	7	8360	78	7.9	618	1379
W. Portal	8	6880				0
BLIND CANYON		(6,788)				
E. Portal	8	—				0
W. Portal	8	6788	78	6.9	539	1136
MORONGO No. 1		(5,512)				
E. Portal	8	5512	78	6.4	499	876
W. Portal	8	—				0
MORONGO No. 2		(1790)				
E. Portal	8	1790				0
W. Portal	8	—				0
Total excav. Force Acct. Tunnels excl. of Adits and Shafts (In Miles)		177,719 33.66	1248	6.71	8374 1.59	69,318 13.13
Total Tunnel Excavation (Miles)		91.86		6.21 ft.	3.97	32.34

Heading excavation is counted as two-thirds of full tunnel excavation.

NEWS FROM FIELD AND OFFICE

As if bent upon providing an object lesson on the wisdom of Colorado River development, the river last week reached one of the lowest stages in its history, causing a serious water shortage in the Imperial Valley. Such crises will be eliminated upon completion of Boulder Dam, which will hold back and conserve the heavy spring flow of the river in a huge 115-mile lake During dry seasons this surplus will be released and allowed to flow down the river.

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With the temperature hovering around 120° in the daytime, athletic events on Division 3 have been suspended for the summer, with the exception of tennis on the court at the Divisional headquarters. The court is lighted, and is put to use every night.

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The Coachella Division's Recreation Hall at Berdoo Camp will be the scene, on Saturday night, July 28, of the first of the monthly divisional dances. The affair is being arranged by a committee including a representative of each of the Division's eight camps, chairmaned by F. T. Fauble, of Berdoo. Music for the dance will be furnished by an aqueduct band.

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An interested visitor along the aqueduct line last week was Engineer James M. Kenyon of England. Mr. Kenyon is on an extended tour of engineering projects throughout the United States.

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Harvey Couch, a director of the Reconstruction Finance Corporation, was a visitor along the aqueduct line last week. Accompanied by Director Greer, Assistant General Manager Burkholder and C. C. Elder of the District staff, and J. H. Roper of the local R. F. C. agency. Mr. Couch and his party inspected work on Boulder Dam, proceeded south through Needles to the aqueduct, visited points of interest on Division 1 and saw Parker Dam site; then proceeded west, stopping at various camps along the line.

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Members of the field engineering staff of the District will be interested in the appointment of Howard Walton as senior engineering field aide for the State Highway Commission with headquarters at San Luis Obispo. Mr. Walton formerly was connected with preliminary aqueduct surveys, and more recently has been assistant city engineer of Fullerton.

Flying During July for the best camp record for safety, progress and economy on the Coachella Division in June were:

Safety Flag—Long Canyon Camp.

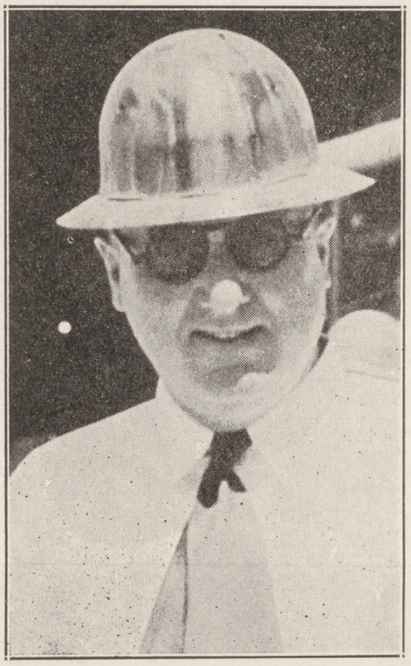
Progress Flag—B e r d o o Camp.

Economy Flag—B e r d o o Camp.

Congratulations Berdoo and Long!

* * *

The Hard Hat emblem of efficiency on Division 3 was awarded by Division Engineer Stearns to Winston Brothers' East Iron Mountain Camp for the third consecutive month.



Folks, meet George Baker, resident engineer on Division 4. Trials and tribulations may come and go, but the thing which keeps troubling Mr. Baker is the job of finding a hard-boiled hat large enough to slide down over that noble brow. Rumor has it that the chief reason for this difficulty is the splendid scholastic record of his son, Everett Baker, who recently received a Ph.D. degree from Gorgetown University.

AQUEDUCT TEMPERATURES
June 24 to July 14, Inclusive

	Max.	Min.
Div 1	120°	68°
Div. 2 and 3	119°	51°
Div. 4	114°	65°
Div. 5 and 6	109°	42°

Si Perliter of the Design Division received an appropriate Father's Day gift this year—a new baby daughter, born on June 17 and called Carol Elaine. The newcomer in the Perliter family gives the Design Division claim to an all-time aqueduct record—four babies in three months. It started on April 6 with the arrival of Clarke Keely's son; on June 6, Paul Vincent Fredericks made his appearance in the Charley Fredericks home, and two days later Carl Heilbron reported the arrival of David Carl Heilbron. It is understood that the boys have organized an aqueduct chapter of the Ancient and Loyal Order of Nocturnal Floorpacers.

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Lost! A black handbag, containing miner's clothes, from running board of car between Morongo and Banning on July 6. E. W. Peterson of Morongo offers a reward for the return of the bag.

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Something new and different in banking service was inaugurated on the Walsh Construction Company's jobs last week, when a representative of the Needles branch of the Bank of America used an airplane to deliver paychecks to the camps.

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Wide publicity has been given to the recently published book of Dr. Ernest L. Bogart, of the University of Illinois, on Southern California's water problems. The volume includes a collection of material relating to the Metropolitan Water District and the Colorado River Aqueduct. It was published by the University of Illinois Press for Claremont Colleges.

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Heavy sale of the special group tickets for Hollywood Bowl concerts was reported last week by H. G. Hawley who is in charge of their distribution. District employees taking advantage of the ticket offer are bringing back enthusiastic reports on the concerts.

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H. F. Henderson and Frank A. Jackson, Y. M. C. A. secretaries from Los Angeles and Pasadena, respectively, were visitors along the aqueduct line last week as guests of Director Cook.

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At Valverde Adit No. 4 work has started on the powder makeup house. All other camp buildings are practically completed.

Kudell Chosen As New Employees' Head

C. W. Kudell, of the Los Angeles office, was elected president of the newly chosen board of control of the Metropolitan Water District Employees' Association, meeting for the first time last week. Hugh Parker of Banning was chosen as vice-president of the group and Geyne Schenk of Los Angeles was re-elected to serve as secretary.

The Board voted that the first Monday in the month following the lay-off be set as meeting day, meetings to be held in accordance with the new constitution on each alternate month.

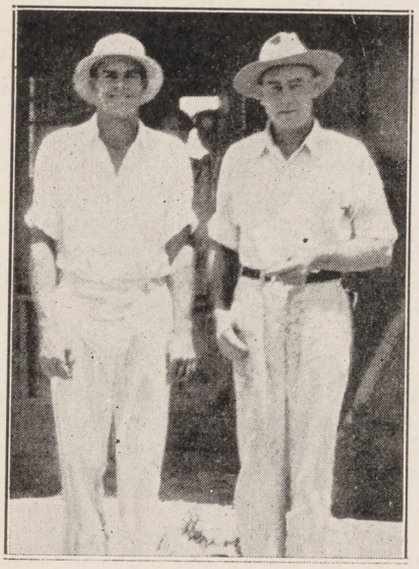
It also was determined that the annual employees' picnic be handled by the field groups and the office group on alternate years. After a discussion by members present, it was decided that the affair be held by the field groups this year, details being entirely under their jurisdiction.

The following resolution was adopted by the Board:

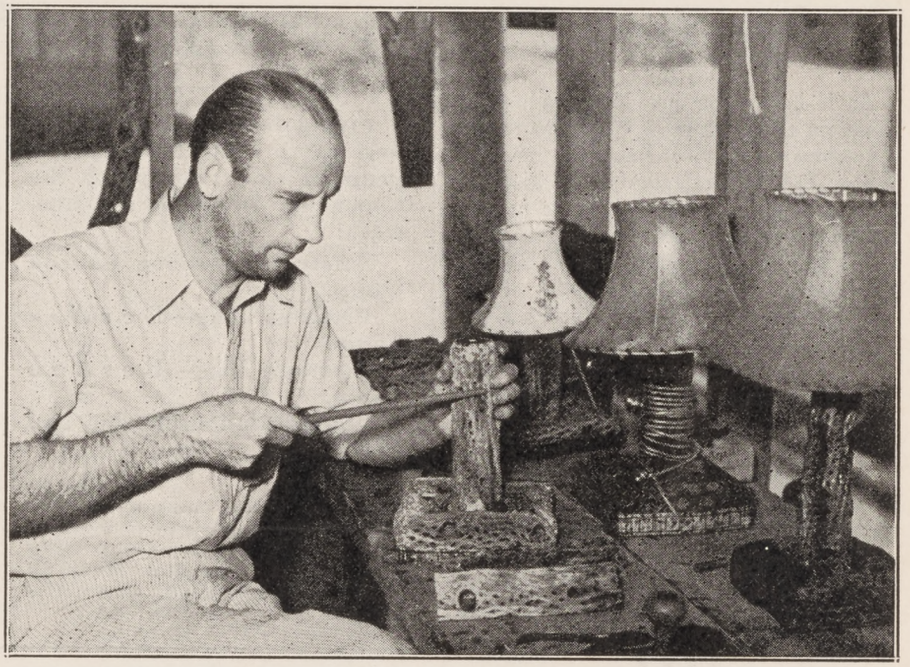
"Whereas, it has been decided by the Governing Boards that the duties of the secretary be relieved as much as possible, that each group handle its own insurance matters; and

"Whereas, it would not be convenient for officers of the Governing Groups to handle the detail in connection with the insurance.

"Be it Resolved, That the Governing Board appoint an employee from their respective groups to handle insurance matters, the Governing Board assuming the responsibility of correct handling."



Record Holders—Tom Evans and Virgil Packham.



Harry Swango in the act of riding his hobby.

Record Is Claimed For Eagle Mt. Miners

Two new champions were crowned last week at Broderick and Gordon's Eagle Mountain tunnel camp.

They were Tom Evans and Virgil Packham whose achievements are described in the following statement of E. C. Warmbrodt, office manager for Broderick and Gordon:

"Mr. Evans has the record of being the only miner who started at the beginning of our job, on October 21, 1933, and worked to the present time without losing a shift, and has been on the same shift over the entire period.

"Mr. Packham also started at the beginning of our job as a scaler, and, although he lost about one week's time, believes that he has the greatest number of man hours as a scaler of anyone on the aqueduct line. Both of these men live, with their families, in the family colony in our camp."

Anyone equalling or surpassing these records of service with construction forces on the aqueduct job is invited to inform the AQUEDUCT NEWS, giving dates of first employment and position. The NEWS will be pleased to record the information, and publish a photograph of the employee if one is sent in. Address communications to The Aqueduct News, 306 W. Third street, Los Angeles.

Lamp Making Hobby of Aqueduct Worker

Omar the lamp maker is the title rapidly being earned by Harry T. Swango, telephone operator at Berdoo camp.

The name comes from his unique hobby, the manufacture of reading and bridge lamps with a real desert flavor. The bases are made from cholla cactus and the shades from goat skin.

Dead and withered cactus is selected and is soaked in a chlorine solution to eliminate the accumulated alkali. Mr. Swango makes reading lamps, bridge lamps, and even combination bridge tables and lamps.

New Mark Is Set By Walsh Co. Crews

A new all-time aqueduct tunnel driving record was established last week by crews of the Walsh Construction Company working on the Colorado River tunnel, most easterly bore on the project.

During the week ending July 14, 251 feet of tunnel was excavated in 21 shifts, making an average advance of 12 feet per shift. Colorado River tunnel also achieved the best progress of any heading on the aqueduct line during the period of June 16 to July 15, making a total of 806 feet.